

13

14

15

16

17

18

according to the scoring criteria associated with the respective selected assigned nodes;

transmitting to each selected assigned node a packet including the data block and a list of the nodes re-assigned to the selected assigned node.

1

2

²4. The method of claim ¹~~3~~, wherein the at least one recipient node includes at least two recipient nodes.

1

2

3

³5. The method of claim ¹~~3~~, further comprising, in the first selected node, generating a user discernable output reflecting information in the data block.

1

2

3

6. The method of claim 1, wherein the scoring criteria for at least one recipient node includes the effective bandwidth of that node.

1

2

3

4

7. The method of claim 1, wherein the scoring criteria for at least one recipient node includes the latency between the first sending node and that recipient node.

1

2

3

4

8. The method of claim 1, wherein the scoring criteria for at least one recipient node includes the amount of time since a packet from that recipient node was received by the first sending node.

1

2

9. The method of claim 1, wherein the data block contains audio data.

1

2

10. The method of claim 1, wherein the data block contains video data.

11 criteria associated with the respective selected assigned
12 nodes;

13 transmit to each selected assigned node a packet
14 including the received data block and a list of the nodes
15 re-assigned to the selected assigned node.

1 27. The product of claim 26, further comprising
2 instructions for causing the particular network node to
3 generate a user discernable output reflecting information in
4 the data block contained in the received packet.

1 28. The product of claim 24, wherein the scoring
2 criteria for at least one recipient node includes the
3 effective bandwidth of that node.

1 29. The product of claim 24, wherein the scoring
2 criteria for at least one recipient node includes the
3 latency between the particular node and the recipient node.

1 30. The product of claim 24, wherein the scoring
2 criteria for at least one recipient node includes the amount
3 of time since a packet from the recipient node was received
4 by the particular node.

1 31. The product of claim 24, wherein the
2 transmitted data block contains audio data.

1 32. The product of claim 24, wherein the
2 transmitted data block contains video data.

1 33. The product of claim 25, wherein the
2 instructions for causing the particular node to assign each
3 unselected node to at least one selected node are

9
1 46. The system of claim 45, wherein the at least
2 one of the plurality of network nodes includes at least two
3 network nodes.

8
1 47. The system of claim 43, wherein at least two of
2 the network nodes are programmed to generate a user
3 discernable output reflecting information in the data block
4 contained in the received packet.

1 48. The system of claim 43, wherein the scoring
2 criteria for at least one recipient node includes the
3 effective bandwidth of the node.

1 49. The system of claim 43, wherein the scoring
2 criteria for at least one recipient node includes the
3 latency between the sending node and the recipient node.

1 50. The system of claim 43, wherein the scoring
2 criteria for at least one recipient node includes the amount
3 of time since a packet from the recipient node was received
4 by the sending node.

1 51. The system of claim 43, wherein the transmitted
2 data block contains audio data.

1 52. The system of claim 43, wherein the transmitted
2 data block contains video data.

1 53. The system of claim 43, wherein there are at
2 least two sending nodes.

10 8
1 54. The system of claim 45, wherein the at least
2 one of the plurality of network nodes includes at least one
3 sending node.

1 55. The system of claim 44, wherein each of the
2 sending nodes is programmed to assign each of the unselected
3 nodes to only one selected node.

1 56. A system for transmitting data comprising:
2 a data network;
3 a plurality of network nodes;
4 wherein at least one particular node of the
5 plurality of network nodes is programmed to:
6 receive from one of the network nodes a packet
7 including a data block and a list of assigned nodes;
8 divide the list of assigned nodes into a subset
9 of selected assigned nodes, selected according to
10 scoring criteria associated with each assigned node,
11 and a subset of unselected assigned nodes;
12 re-assign at least one of the unselected
13 assigned nodes to at least one selected assigned
14 node according to the scoring criteria associated
15 with respective selected assigned nodes;
16 transmit to each selected assigned node a
17 packet including the received data block and a list
18 of the nodes re-assigned to the selected assigned
19 node.

1 57. The system of claim 56, wherein the at least
2 one particular node is programmed to re-assign each of the
3 unselected assigned nodes to at least one selected assigned
4 node.

1 1. A method for transmitting a data block over a
2 network from a first sending node to a first set of
3 recipient nodes, comprising:
4 in the first sending node:
5 dividing the first set of recipient nodes into
6 a subset of selected nodes, selected according to
7 scoring criteria associated with each recipient
8 node, and a subset of unselected nodes;
9 assigning at least one of the unselected nodes
10 to at least one selected node according to scoring
11 criteria associated with the respective selected
12 nodes;
13 transmitting to each selected node a
14 packet including the data block and a first
15 list of the nodes assigned to the selected
16 node.

1 2. The method of claim 1, wherein each unselected
2 node is assigned to at least one selected node.

1 3. The method of claim 1, further comprising:
2 in at least one recipient node:

3 receiving from the first sending node the
4 packet including the data block and the first list
5 of assigned nodes;

6 dividing the first list of assigned nodes into
7 a subset of selected assigned nodes, selected
8 according to scoring criteria associated with each
9 assigned node, and a subset of unselected assigned
10 nodes;

11 re-assigning each of the unselected assigned
12 nodes to at least one selected assigned node

1 11. The method of claim 2, wherein each unselected
2 node is assigned to only one selected node.

1 12. The method of claim 1, further comprising:
2 in a second sending node, which is also in the first
3 set of recipient nodes:

4 dividing a second set of recipient nodes into a
5 subset of selected nodes, selected according to
6 scoring criteria associated with each recipient
7 node, and a subset of unselected nodes;

8 assigning each of the unselected nodes from the
9 second set of recipient nodes to at least one
10 selected node from the second set of recipient nodes
11 according to scoring criteria associated with the
12 respective selected nodes;

13 transmitting to each selected node from
14 the second set of recipient nodes a packet
15 including the data block and a second list of
16 the nodes assigned to the selected node.

1 13. The method of claim 12, further comprising:
2 in a second selected node:

3 receiving from the second sending node the
4 packet including the data block and the second list
5 of assigned nodes;

6 dividing the second list of assigned nodes into
7 a subset of selected assigned nodes, selected
8 according to scoring criteria associated with each
9 assigned node, and a subset of unselected assigned
10 nodes;

11 re-assigning each of the unselected assigned
12 nodes from the second list of assigned nodes to at
13 least one selected assigned node from the second

14 list of assigned nodes according to the scoring
15 criteria associated with the respective selected
16 assigned nodes;

17 transmitting to each selected assigned
18 node from the second list of assigned nodes a
19 packet including the data block and a list of
20 the nodes re-assigned to that node.

1 14. A method for transmitting a data block over a
2 network from a first sending node to a first set of
3 recipient nodes, comprising:

4 in at least one selected node in the first set of
5 recipient nodes:

6 receiving from the sending node the packet
7 including the data block and a list of assigned
8 nodes;

9 dividing the list of assigned nodes into a
10 subset of selected assigned nodes, selected
11 according to scoring criteria associated with each
12 assigned node, and a subset of unselected assigned
13 nodes;

14 re-assigning at least one of the unselected
15 assigned nodes to at least one selected assigned
16 node according to the scoring criteria associated
17 with the respective selected assigned nodes;

18 transmitting to each selected assigned
19 node a packet including the data block and a
20 list of the nodes re-assigned to the selected
21 assigned node.

1 15. The method of claim 14, wherein each unselected
2 assigned node is re-assigned to at least one selected
3 assigned node.

1 16. The method of claim 14, wherein the at least
2 one selected node includes at least two selected nodes.

1 17. The method of claim 14, further comprising, in
2 at least two of the first set of recipient nodes, generating
3 a user discernable output reflecting information in the data
4 block.

1 18. The method of claim 14, wherein the scoring
2 criteria for at least one of the nodes on the list of
3 assigned nodes includes the effective bandwidth of that
4 node.

1 19. The method of claim 14, wherein the scoring
2 criteria for at least one of the nodes on the list of
3 assigned nodes includes the latency between the assigned
4 node and the selected node.

1 20. The method of claim 14, wherein the scoring
2 criteria for at least one of the nodes on the list of
3 assigned nodes includes the amount of time since a packet
4 from the assigned node was received by the selected node.

1 21. The method of claim 14, wherein the data block
2 contains audio data.

1 22. The method of claim 14, wherein the data block
2 contains video data.

1 23. The method of claim 15, wherein each unselected
2 assigned node is re-assigned to only one selected assigned
3 node.

1 24. A computer program product residing on a
2 computer readable medium comprising instructions for causing
3 a particular network node, connected to a network having a
4 plurality of network nodes, to:

5 create a first set of recipient nodes from among the
6 plurality of network nodes;

7 divide the first set of recipient nodes into a
8 subset of selected nodes, selected according to scoring
9 criteria associated with each recipient node, and a subset
10 of unselected nodes;

11 assign at least one of the unselected nodes to at
12 least one selected node according to scoring criteria
13 associated with the respective selected nodes;

14 transmit to each selected node a packet including a
15 data block and a list of the nodes assigned to the selected
16 node.

1 25. The product of claim 24, further comprising
2 instructions for causing the particular network node to
3 assign each of the unselected nodes to at least one selected
4 node.

1 26. The product of claim 24, further comprising
2 instructions for causing the particular network node to:

3 receive from one of the network nodes a packet
4 including a data block and a list of assigned nodes;

5 divide the received list of assigned nodes into a
6 subset of selected assigned nodes, selected according to
7 scoring criteria associated with each assigned node, and a
8 subset of unselected assigned nodes;

9 re-assign each of the unselected assigned nodes to
10 at least one selected assigned node according to the scoring

4 instructions for causing the particular node to assign each
5 unselected node to only one selected node.

1 34. A computer program product residing on a
2 computer readable medium comprising instructions for causing
3 a particular network node, connected to a network having a
4 plurality of network nodes, to:

5 receive from one of the network nodes a packet
6 including a data block and a list of assigned nodes;
7 divide the list of assigned nodes into a subset of
8 selected assigned nodes, selected according to scoring
9 criteria associated with each assigned node, and a subset of
10 unselected assigned nodes;

11 re-assign at least one of the unselected assigned
12 nodes to at least one selected assigned node according to
13 the scoring criteria associated with respective selected
14 assigned nodes;

15 transmit to each selected assigned node a packet
16 including the received data block and a list of the nodes
17 re-assigned to the selected assigned node.

1 35. The product of claim 34, further comprising
2 instructions for causing the particular network node to re-
3 assign each of the unselected assigned nodes to at least one
4 selected assigned node.

1 36. The product of claim 34, further comprising
2 instructions for causing the first network node to generate
3 a user discernable output reflecting information in the data
4 block contained in the received packet.

1 37. The product of claim 34, wherein the scoring
2 criteria for at least one node on the list of assigned nodes
3 includes the effective bandwidth of the node.

1 38. The product of claim 34, wherein the scoring
2 criteria for at least one node on the list of assigned nodes
3 includes the latency between that node and the particular
4 network node.

1 39. The product of claim 34, wherein the scoring
2 criteria for at least one node on the list of assigned nodes
3 includes the amount of time since a packet from that node
4 was received by the particular network node.

1 40. The product of claim 34, wherein the
2 transmitted data block contains audio data.

1 41. The product of claim 34, wherein the
2 transmitted data block contains video data.

1 42. The product of claim 35, wherein the
2 instructions for causing the particular network node to re-
3 assign each unselected assigned node to at least one
4 selected assigned node cause the particular network node to
5 re-assign each unselected assigned node to only one selected
6 assigned node.

1 43. A system for transmitting data comprising:
2 a data network;
3 a plurality of network nodes, including at least one
4 sending node;
5 wherein each sending node is programmed to:

6 create a first set of recipient nodes from
7 among the plurality of network nodes;
8 divide the first set of recipient nodes into a
9 subset of selected nodes, selected according to
10 scoring criteria associated with each recipient
11 node, and a subset of unselected nodes;
12 assign at least one of the unselected nodes to
13 at least one selected node according to scoring
14 criteria associated with the respective selected
15 nodes;
16 transmit to each selected node a packet
17 including a data block and a list of the nodes
18 assigned to the selected node.

1 44. The system of claim 43, wherein each sending
2 node is programmed to assign each of the unselected nodes to
3 at least one selected node.

1 45. The system of claim 43, wherein at least one of
2 the plurality of network nodes is programmed to:
3 receive from one of the network nodes a packet
4 including a data block and a list of assigned nodes;
5 divide the list of assigned nodes into a subset of
6 selected assigned nodes, selected according to scoring
7 criteria associated with each assigned node, and a subset of
8 unselected assigned nodes;
9 re-assign each of the unselected assigned nodes to
10 at least one selected assigned node according to the scoring
11 criteria associated with respective selected assigned nodes;
12 transmit to each selected assigned node a packet
13 including the received data block and a list of the nodes
14 re-assigned to the selected assigned node.

1 58. The system of claim 56, wherein the at least
2 one particular node includes at least two particular nodes.

1 59. The system of claim 56, wherein at least two of
2 the network nodes are programmed to generate a user
3 discernable output reflecting information in the data block
4 contained in the received packet.

1 60. The system of claim 56, wherein the scoring
2 criteria for at least one node from the list of assigned
3 nodes includes the effective bandwidth of the node.

1 61. The system of claim 56, wherein the scoring
2 criteria for at least one node from the list of assigned
3 nodes includes the latency between the particular node and
4 the assigned node.

1 62. The system of claim 56, wherein the scoring
2 criteria for at least one node from the list of assigned
3 nodes includes the amount of time since a packet from the
4 assigned node was received by the particular node.

1 63. The system of claim 56, wherein the transmitted
2 data block contains audio data.

1 64. The system of claim 56, wherein the transmitted
2 data block contains video data.

1 65. The system of claim 56, wherein there are at
2 least two sending nodes.

1 66. The system of claim 56, wherein the at least
2 one particular node of the plurality of network nodes
3 includes at least one sending node.

1 67. The system of claim 57, wherein the at least
2 one particular node is programmed to re-assign each
3 unselected assigned node to only one selected assigned node.

add
all

66
67
68
69
70
71
72
73
74
75
76
77
78
79
80
81
82
83
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
99
100